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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/557,694	11/22/2005	Hideo Hada	SHIGA7.033APC	7849

20995 7590 11/20/2008
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EXAMINER

EOFF, ANCA

ART UNIT	PAPER NUMBER
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1795

NOTIFICATION DATE	DELIVERY MODE
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11/20/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary	Application No. 10/557,694	Applicant(s) HADA ET AL.	
	Examiner ANCA EOF	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 7-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23 and 24 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,10,11 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 8, 9,12-17 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/07/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 3-4 and 7-24 are pending. Claims 2 and 5-6 are canceled.
2. The foreign priority documents JP 2003-160478, filed on June 5, 2003 and JP 2003-428853, filed on December 25, 2003 were received and acknowledged. However, in order to benefit of the earlier filing dates, certified English translations are required.

The certified translation of JP 2004-57449, filed on March 02, 2004 was received and acknowledged.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4 and 18-19 depend on claim 1 and comprise the limitation "the first structural unit". There is insufficient antecedent basis for this limitation in claim 1.

Claims 20 and 21 depend on claim 5 which was canceled in the applicant's amendment to the claims filed on August 29, 2008. Therefore, it is not clear what applicant regards as his invention.

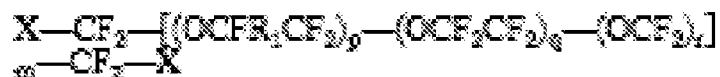
Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraph of 35 U.S.C. 102 that forms the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, 11 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawasato et al. (US Pg-Pub 2003/0049456).

Kawasato et al. disclose a polymer having 1 or 2 reactive groups at both terminals, said polymer being represented by the formula:



(formula 1 in par.0057), wherein X may be a hydroxyl group (par.0058).

The polymer of Kawasato et al. meets the limitations of claim 1, 3 and 19 of the instant application for a resin comprising a -CR₁R₂OH group, wherein R₁ and R₂ are electron attractive fluorine atoms and the group -CR₁R₂OH is bonded at the terminal of the principal chain of the resin.

The fact that the resin is used for a photoresist composition is an intended use of the resin and adds no patentable weight to the claim. Therefore, the polymer of Kawasato et al. is equivalent to the resin of claims 1, 3 and 19 of the instant application.

The composition of Kawasato et al. (par.0052, par.0057, par.0105) is equivalent to the composition of claim 11. The fact that the composition is used as photoresist is an intended use and adds no patentable weight to the claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

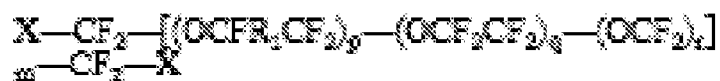
8. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasato et al. (US Pg-Pub 2003/0049456).

With regard to claim 4, Kawasato et al. disclose the polymer of claim 1 (see paragraph 6 of the Office Action) , wherein p, q, r and m are integers (par.0058) and further disclose that the polymer has a number average molecular weight preferably between 1,000 to 10,000 (par.0057).

Kawasato et al. do not specifically disclose that the terminal group CF_2X , wherein X may be a hydroxyl group (par.0057-0058) is comprised in an amount of at least 1 mol% relative to 100 mol% of all structural units of the resin.

When the polymer has a number average molecular weight of 1,000 (the lower limit of the range for the number average molecular weight of the polymer, as taught in par.0057), the groups $-\text{CF}_2\text{X}$, wherein X may be a hydroxyl group are comprised in an amount of approximately 12 mol% and such a value is in the range of the instant application.

With regard to claim 7, Kawasato et al. disclose the polymer of formula:



(formula 1 in par.0057), wherein X may be a hydroxyl group or an epoxy group (par.0058).

While Kawasato et al. do not disclose a polymer having a hydroxyl terminal group and an epoxy terminal group, it would have been obvious to one of ordinary skill in the art at the time of the invention to obtain such a polymer, based on Kawasato's teaching regarding the polymer and the possible terminal groups X (par.0057, par.0058).

An epoxy group is equivalent to the cyclic ether acid dissociable group of the instant application, as taught on page 8, line 19 of the specification.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawasato et al. (US Pg-Pub 2003/0049456) in view of Satoh (WO 02/077116, wherein the citations are from the English equivalent document US Pg-Pub 2004/0186216).

Kawasato et al. disclose the polymer of claim 1 (see paragraph of the Office Action) and further disclose that the polymer is used for an antireflective film (par. 0052, 0057) and has a number average molecular weight preferably between 1,000 to 10,000 (par.0057). However, Kawasato et al. fail to disclose the weight average molecular weight of the polymer.

Satoh et al. disclose thermosetting compositions used for optical lens, antireflective films and resins for optical three-dimensional shaping (par.0002).

Satoh et al. disclose a fluoropolymer consisting of allyl ether units and having a hydroxyl group at a side chain terminal, wherein said polymer has a number average molecular weight of 9,000 and a weight average molecular weight of 22,000 (par.0361).

The polymer of Satoh et al. has a polydispersity Mw/Mn of 2.4.

Based on the fact that the fluoropolymers of Kawasato et al. and Satoh et al. have similar structures, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Satoh et al. for the fluoropolymers of Kawasato et al. and produce fluoropolymers with a polydispersity Mw/Mn of 2.4.

When the fluoropolymers of Kawasato et al. have a number average molecular weight Mn between 1,000 and 10,000 (par.0067) and a polydispersity Mw/Mn of 2.4, fluoropolymers having a weight molecular weight between 2,400 and 24,000 may be obtained and this range encompasses the range of the instant application.

Allowable Subject Matter

10. Claims 23 and 24 are allowed.
11. Claims 8, 9, 12-17 and 22 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. The rejection of claims 1, 3, 5, 7-13, 16-17, 19 and 21 under 35USC 102(e) over Hirayama et al. (US Pg-Pub 2005/0014090) was withdrawn following the filing of the certified translation of JP 2004-57449, filed on March 02, 2004.
13. The rejection of claims 1, 3-5, 7, 11-13, 16-17, 19 and 21 under 35 USC 102(b) over Przybilla et al., the rejection of claims 1, 3, 5, 7-13, 16-17, 19 and 21 under 35

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USC 102(b) over Pawlsowski et al. and the rejection of claims 1, 5, 18 and 20 under 35 USC 1039a) over Feiring et al. (US Pg-Pub 2005/0203262) have been withdrawn following the applicant's amendment to claim 1.

14. Applicant's arguments filed on August 29, 2008 with regard to the rejection of claims 1, 3 and 19 under 35 USC 102(b) over Kawasato et al. have been fully considered but they are not persuasive.

In Kawasato et al., the groups $-CR_1R_2OH$ are not present inside the principal chain, as the applicant argues on page 7 of the Remarks, but at the terminals of the principal chain, as shown in the formula in paragraph 5 of the Previous Office Action.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANCA EOFF whose telephone number is (571)272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. E./
Examiner, Art Unit 1795

/Cynthia H Kelly/
Supervisory Patent Examiner, Art Unit 1795